**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method of estimating channel coefficients ~~(h)~~ in a multi carrier system operating in accordance with a block-code based transmit diversity scheme, in which a data content ~~($C^{(i)}$)~~ of a code matrix ~~(C)~~ is multiplexed in a frequency domain, comprising:

a) determining a phase ramp ~~($\varphi_{est}$)~~ in the frequency domain or an equivalent ~~($\Delta t$)~~ thereof in the time domain, the phase ramp ~~($\varphi_{est}$)~~ or the equivalent ~~($\Delta t$)~~ thereof being comprised within a receive signal ~~($Y_{\Delta t}$)~~ after timing synchronization;

b) processing the receive signal ~~($Y_{\Delta t}$)~~ to remove the phase ramp ~~($\varphi_{est}$)~~ or the equivalent ~~($\Delta t$)~~ thereof; and

c) estimating the channel coefficients ~~(h)~~ on the basis of the processed receive signal ~~($Y_{\Delta t}$)~~.

2. (currently amended) The method of claim 1, wherein the phase ramp ~~($\varphi_{est}$)~~ or the equivalent ~~($\Delta t$)~~ thereof is determined by way of estimation.

3. (original) The method of claim 2, wherein the estimation is performed by linear regression.

4. (previously presented) The method of claim 1, further comprising the step of performing timing synchronization with the object of minimizing intersymbol interference.

5. (previously presented) The method of claim 1, wherein at least one of steps a) and b) is performed in the frequency domain.

6. (previously presented) The method of claim 1, wherein at least one of steps a) and b) is performed in a time domain.

7. (currently amended) The method of claim 1, wherein after timing synchronization the receive signal ~~($\mathbf{Y}_{\Delta t}$)~~ is split and fed into a channel estimation branch ~~(56)~~ on the one hand and a demodulation branch ~~(58)~~ on the other hand, and wherein the phase ramp ~~($\varphi_{est}$)~~ or the equivalent ~~($\Delta t$)~~ thereof is removed in the channel estimation branch ~~(56)~~.

8. (currently amended) The method of claim 1, wherein after timing synchronization the receive signal ~~($\mathbf{Y}_{\Delta t}$)~~ is split and fed into a channel estimation branch ~~(56)~~ on the one hand and a demodulation branch ~~(58)~~ on the other hand, and wherein the phase ramp ~~($\varphi_{est}$)~~ or the equivalent ~~($\Delta t$)~~ thereof is removed prior to splitting of the receive signal ~~($\mathbf{Y}_{\Delta t}$)~~.

9. (currently amended) The method of claim 1, further comprising introducing the phase ramp ~~($\varphi_{est}$)~~ or the equivalent ~~($\Delta t$)~~ thereof into the estimated channel coefficients ~~($\hat{h}$)~~.

10. (currently amended) The method of claim 1, further comprising demodulating the receive signal ~~($\mathbf{Y}_{\Delta t}$)~~ utilizing the estimated channel coefficients ~~($\hat{h}$)~~.

11. (currently amended) The method of claim 1, wherein the block-code based transmit diversity scheme of space-frequency block coding ~~(SFBC)~~ or of permutation in the frequency domain is employed.

12. (currently amended) A computer program product comprising program code portions stored on a computer readable recording medium for performing the steps of claim 1 when the ~~product~~ program code is run on a computer.

13. Canceled.

14. (currently amended) Apparatus for estimating channel coefficients ~~(h)~~ in a multi carrier system operating in accordance with a block-code based transmit diversity scheme in which a data content ~~($C^{(i)}$)~~ of a code matrix ~~(C)~~ is multiplexed in a frequency domain, comprising:

a) a unit ~~(48)~~ for determining a phase ramp ~~($\varphi_{est}$)~~ in the frequency domain or an equivalent ~~($\Delta t$)~~ thereof in the time domain, the phase ramp ~~($\varphi_{est}$)~~ or the equivalent ~~($\Delta t$)~~ thereof being comprised within a receive signal ~~($Y_{\Delta t}$)~~ after timing synchronization;

b) a unit ~~(50)~~ for processing the receive signal ~~($Y_{\Delta t}$)~~ to remove the phase ramp ~~($\varphi_{est}$)~~ or the equivalent ~~($\Delta t$)~~ thereof; and

c) a unit ~~(44)~~ for estimating the channel coefficients ~~(h)~~ on the basis of the processed receive signal ~~($Y_{\Delta t}$)~~.

15. (currently amended) The ~~estimating stage~~apparatus according to claim 14, further comprising a node ~~(54)~~ for splitting a signal path ~~(55)~~ after timing synchronization into a channel estimation branch ~~(56)~~ on the one hand and a demodulation branch ~~(58)~~ on the other hand, and wherein the unit ~~(50)~~ for processing the receive signal ~~($Y_{\Delta t}$)~~ is arranged in the channel estimation branch ~~(56)~~.

16. (currently amended) The ~~estimating stage~~apparatus according to claim 14, further comprising a node ~~(54)~~ for splitting a signal path ~~(55)~~ after timing synchronization into a channel estimation branch ~~(56)~~ on the one hand and a demodulation branch ~~(58)~~ on the other hand, and wherein the unit ~~(50)~~ for processing the receive signal ~~($Y_{\Delta t}$)~~ is arranged in the signal path ~~(55)~~ prior to the node ~~(54)~~.

17. (currently amended) The estimating stage according to claim 14, further comprising a unit ~~(52)~~ for introducing the phase ramp ~~($\varphi_{est}$)~~ or the equivalent ~~($\Delta t$)~~ thereof into the estimated channel coefficients ~~($\hat{h}$)~~.

18. (currently amended) A transceiver of a wireless communication system comprising a receiver stage ~~(40)~~ with an estimating stage ~~(60)~~ according to claim 14.

19. (new) An estimating stage for estimating channel coefficients in a multi carrier system operating in accordance with a block-code based transmit diversity scheme in which a data content of a code matrix is multiplexed in a frequency domain, comprising:

a) means for determining a phase ramp in the frequency domain or an equivalent ~~($\Delta t$)~~ thereof in the time domain, the phase ramp or the equivalent thereof being comprised within a receive signal after timing synchronization;

b) means for processing the receive signal to remove the phase ramp or the equivalent thereof; and

c) means for estimating the channel coefficients on the basis of the processed receive signal.

20. (new) The estimating stage according to claim 19, further comprising a node for splitting a signal path after timing synchronization into a channel estimation branch on the one hand and a demodulation branch on the other hand, and wherein the means for processing the receive signal is arranged in the channel estimation branch.

21. (new) The estimating stage according to claim 19, further comprising a node for splitting a signal path after timing synchronization into a channel estimation branch on the one hand and a demodulation branch on the other hand, and wherein the means for processing the receive signal is arranged in the signal path prior to the node.

22. (new) The estimating stage according to claim 19, further comprising a means for introducing the phase ramp or the equivalent thereof into the estimated channel coefficients.

23. (new) A transceiver of a wireless communication system comprising a receiver stage with an estimating stage according to claim 19.